

EBD331e

Indoor/Outdoor Mini Ball Camera

700TVL, 3-Axis, IP66, IR

User's Manual



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Release Date: August, 2012

CAUTIONS

1. Do not install the camera near electric or magnetic fields.
2. Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein.
3. Try to avoid facing the camera toward the sun.
4. Keep the power cable away from water and other liquids and never touch the power cord with wet hands.
5. Never install the camera in areas exposed to oil, gas or solvents.
6. Do not operate the camera beyond the specified temperature or humidity. Use the camera at temperatures within $-10^{\circ}\text{C}\sim 50^{\circ}\text{C}$ ($14^{\circ}\text{F}\sim 122^{\circ}\text{F}$) and humidity between 20%~ 80%; this device is not rated as submersible.
7. Determine the **polarity** of the power adapter pigtail before connecting the camera to the power source. The input power source is **12V DC**.

1. INTRODUCTION

The EBD331e Ball camera is equipped with a 1/3” Sony 960H CCD image sensor providing resolution of 700 TVL. Featured with the Digital Wide Dynamic Range (D-WDR) function, the camera can provide clear images even under back light circumstances where intensity of illumination can vary excessively.

The EBD331e comes with 24 IR LEDs, supporting up to 15m (~50ft.) IR distance in night vision. The camera can work in both indoor and outdoor environments. The IP66-rating and vandal proof housing make it suitable for outdoor use.

Model Name	Scanning System
EBD331e/N	NTSC
EBD331e/P	PAL
Note: The models vary among countries. Please visit EverFocus regional Websites for detailed ordering information.	

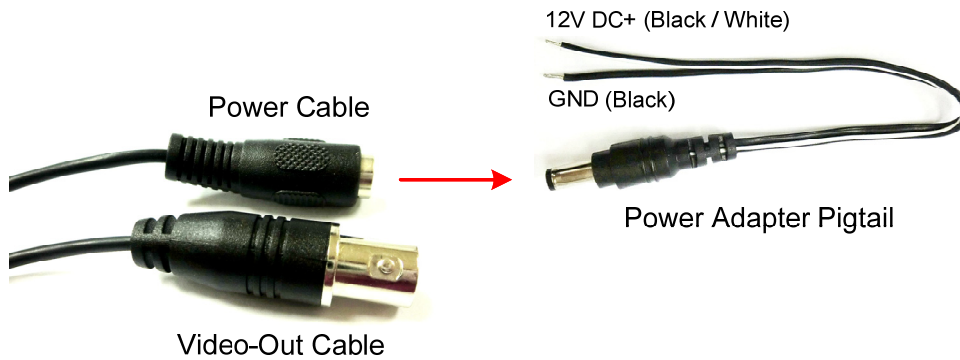
1.1 FEATURES

- 3-Axis, Sony 1/3” 960H CCD Sensor, 700 TVL resolution
- Sony Effio-E platform to provide advanced camera functions
- Fixed Lens f=3.6mm
- 24 IR LEDs reach up to 15m (~50ft.) IR distance
- Supports double glass
- D-WDR function based on Sony’s ATR technology
- DNR function that reduces image noise to save storage space
- High sensitivity, low smear, high anti-blooming and high S/N ratio for high performance video
- Built-in Auto Electronic Shutter (AES), Auto Gain Control (AGC) and Auto White Balance (AWB)

1.2 PACKAGE CONTENTS

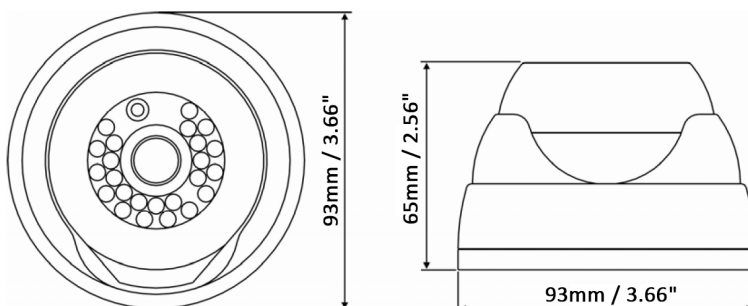
1. EBD331e camera x 1
2. Mounting Template x 1
3. User Manual x 1
4. Accessory kit x 1 (4 Screws, 4 Anchors and one Hexagon Wrench)
5. Power Adapter Pigtail x 1

1.3 CABLE DEFINITIONS



Cable Name	Description
Power Cable	Connects to the 12V DC power source. You can optionally use the supplied Power Adapter Pigtail or a power adapter.
Video-Out Cable (BNC)	Connects to a DVR or a portable monitor for adjusting camera angles.
Power Adapter Pigtail	Connects one end to the Power Cable, and the other end to the 12V DC power source (black wire to ground end; black / white wire to positive end).

1.4 DIMENSIONS



2. SPECIFICATIONS

Pickup Device	1/3" SONY 960H CCD
Video Format	NTSC or PAL (depends on model selected)
Picture Elements	1020 x 508 (NTSC), 1020 x 596 (PAL)
Horizontal Resolution	700 TVL
Sensitivity	0.01 Lux / F=1.2; 0 Lux IR On
S/N Ratio	Over 48dB (AGC off)
Electronic Shutter	1/50 (1/60) ~ 1/100,000 sec.
Video Output	BNC 1.0 Vp-p ,75ohm
Gamma Correction	0.45
Lens Type	Fixed Lens f=3.6mm / F=2.0
Auto Gain Control	Yes
White Balance	Auto
Sync. Mode	Internal Sync.
Day & Night	Yes, Day & Night auto switch
DNR	On
D-WDR	Auto (Sony ATR)
IR LED	24 Units IR LED
IR Wavelength	850nm
IR Distance	15m (~50ft.)
Power Source	12V DC
Power Consumption	12V DC: 310mA / 4W max.
Operating Temperature	-10°C~50°C / 14°F~122°F
Humidity	20% ~ 80% non-condensing
Dimensions (O.D x H)	93 x 65 mm / 3.66 x 2.56 in
Weight	310 g / 0.7 lb
Certifications	CE / FCC

3. INSTALLATION & OPERATION

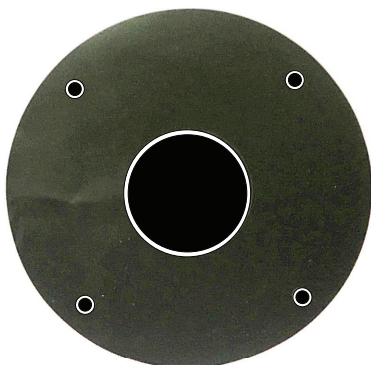
1. Unscrew the Set Screw using the supplied Hexagon Wrench.



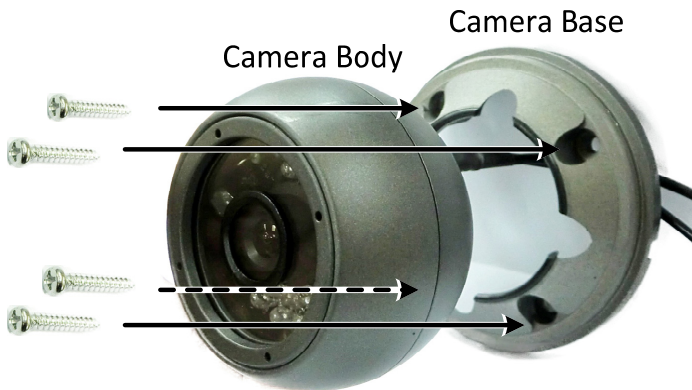
2. Unscrew the Outer Housing by twisting it counterclockwise and then remove the Outer Housing from the Camera Base.



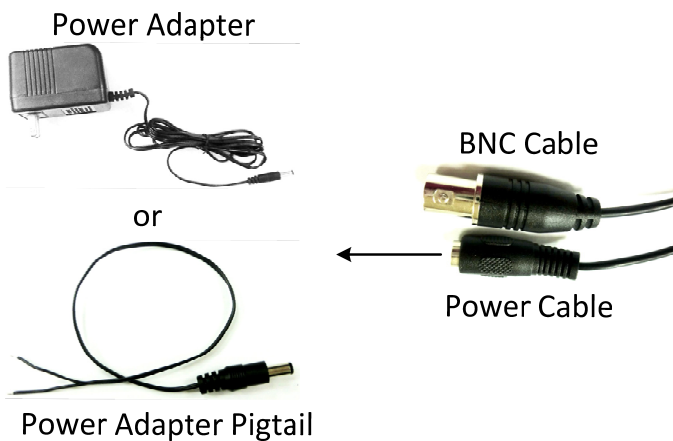
3. Paste the supplied mounting template onto a desired location on the ceiling / wall. Drill the four small holes for screwing the camera with the supplied Screws and Anchors, and the circle in the middle only if you wish to run the wires into the wall.



4. Insert the supplied 4 Anchors into the 4 holes on the ceiling / wall.
5. Screw the Camera Base to the ceiling / wall using the supplied 4 Screws.
 - a. If you want to wire the cables from the side cut of the Camera Base, run the cables through the Camera Base first, attach and then screw the Camera Base to the ceiling / wall.



- b. If you want to wire the cables through the wall, attach and then screw the Camera Base to the ceiling / wall. Attach the Camera Body to the Camera Base.
6. Connect the camera to the 12V DC power source using the supplied Power Adapter Pigtail or a power adapter.



7. Connect the camera to a DVR or a portable monitor using the Video-Out cable for viewing the camera view while adjusting camera angles.
8. Screw back the Outer Housing and adjust the camera angle simultaneously.
9. Screw back the Set Screw using the supplied Hexagon Wrench.

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